

## ABSTRACT OF THE DISCLOSURE

A computer-implemented system and method for simulating the movement of motor vehicle and bicycle traffic in an environment. Among other things, the system and method scan all traffic signals in the environment over a predetermined time interval, and then update parking activity, pedestrian movement, and motor vehicle and bicycle movement in the environment. The system and method also check whether any parking activity was generated for the predetermined time period, and simulates pedestrian movement in the environment. Finally, the system and method simulate motor vehicle and bicycle movement in the environment using predetermined acceleration and deceleration rates, a motor vehicle following model, and a lane changing model.